Remarks of Ambassador Bleich to the Australian and New Zealand Sustainability Circle, Sydney

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Good afternoon. Thank you, Craig and for that very generous introduction and thank you to Bank of America-Merrill Lynch for hosting this event. Thank you also Professor Dunphy for those insightful opening remarks. It is a privilege to be with all of you. I want to specially acknowledge the Her Worship, the Lord Mayor of Sydney, the Honorable Clover Moore. Finally, since my topic today involves population growth, I want to congratulate John Weiss, Global CEO for the Trans-Tasman Business Council, who just added a new grand-daughter to the world this weekend.

It's good to be here with the members of the Australia and New Zealand Sustainability Circle. I understand from the people at the Embassy that A and N Zed Sustain – is not to be confused with A-N-Zed Bank. Although as Warwick Smith here, and my friend Mike Smith can attest, it's not such a bad thing to be confused with their bank, these days. . . In fact, Warwick, based on the bank's recent performance, I'm considering changing my last name to "Smith" so I can apply for a senior level job with you.

What I'd like to do today is first lay out the respective roles of government and business in addressing unsustainable practices. Second, give some history on how we got to this point of focusing collectively on the need to change our water, food, and energy management practices. And then Third, I'd like to discuss some concrete things we all need to do together to make sure we can feed, hydrate, and power the world that our children and grandchildren will inhabit.

The Business Case for Sustainability and Businesses Role

While I'm the U.S. Ambassador to Australia and not New Zealand, I'm sure my friend and colleague Ambassador David Huebner won't mind my talking about all three of our nations' approaches in the area of corporate sustainability. As long as I also mention that the All Blacks won the Rugby World Cup. And Australia didn't.

As friends and partners, Australia, New Zealand, and the United States cooperate in an enormous array of human endeavors in the sciences, trade, space research, education, health, development, and agriculture. This is true in both government and business.

But governments and businesses tend to have different strengths in promoting sustainability. Governments tend to be good at discovering the external costs of current practices. The Government's job is to protect the entire community, not any particular industry. So it has both the duty, and the ability, to be more clear-eyed about identifying external constraints than industry itself. Although many good business people are good corporate citizens, industries as a whole lack the financial incentive to discover that their success has negative external effects. On the other hand, business is much better at innovating once those limits are discovered. Business can take the Government's concerns and find a better way to do things.

The Government can't solve all of our problems and neither can the free market. It's up to both of us together -- business leaders and regulators working together -- to find a way to manage resources within limits, or find ways to extend those limits.

Government's Discovery of Natural Resource Limits

Much of what we know about the limits in environmental sustainability can be credited to research here in New South Wales. The Parkes Radio Telescope will turn 50 years old next week. Now for most of us, Parkes is famous for its role in the Apollo lunar missions. Parkes got the credit in the movie "The Dish" for relaying Neil Armstrong's message from the moon, even though it actually came through a different dish near Canberra. So if nothing else you've got to hand it to them for good branding. Your marketing guys could learn something in Parkes.

But there's a different story about Parkes. The very same year that Parkes assisted with the first moon landing -- 1969 --Parkes helped map the galaxy. Work in the '50s had shown that the galaxy has spiral arms. Parkes helped refine the picture by mapping the galaxy's main constituent, hydrogen gas. That work helped put in perspective the fragility of our home: a blue speck in the Milky Way galaxy, itself one of billions of galaxies in the universe. In many ways, ironically, conquering space travel did not teach us we could dominate nature. If anything, it ushered in a new more mature wisdom and humility about the limits of our planet. We no longer had confidence that some benign presence hiding just beyond the clouds always looking after our planet. We discovered that the type of life-sustaining systems here on earth did not appear to exist in any other nearby planets. We lost the naïve believe that our eco-systems were limitless.

Part of the environmental movement of the 70s was fueled by these scientific discoveries that the United States and Australia helped advance. Those discoveries helped us understand how we must harness technology to adapt to real limits. Suddenly, we were fully aware of the thin and fragile shell of protection ozone provides against ultra-violet

rays. We could understand the direct impact of various emissions on our air quality and climate. And from the maps we produced from space we could see clearly the limits of our water supplies, fuel sources, and other critical resources.

In short, our understanding of what constitutes sustainable living has expanded as the world has shrunk. For our three nations, our nation's security depends not only defense, but also on sustainability. In fact, the greatest source of potential instability and destruction in this region today is not a foreign invasion; it is natural processes that are already in action. Our concept of security touches on all of these – climate change, the spread of infectious diseases, population displacements and migration, agricultural practices, energy generation, and water management.

That was government's success and challenge. Now let's talk about business.

Your businesses and organizations understand this basic truth of the 21st century – you look for growth and investment opportunities worldwide. With your global workforces and networks, you understand how some of the issues present both risks and opportunities. You know the risks that massive dislocations of people due to famine, floods, drought, pollution, or energy shortages would have on your business. On the other hand, you know that the big emerging markets will deliver a greater share of your future profits if you can help avoid those events. Success or failure depends on whether those markets are able to deliver growth sustainably.

Meeting the Water, Food, and Energy Demands of the Next Century

In particular, there are three challenges business will confront in the decades ahead. These challenges relate to water, energy, and food security.

The most immediate challenge here in the Asia-Pacific is to produce and provide adequate water, food, and energy to meet the demands of a rapidly growing industrialized world. The challenge arises from the great events that are occurring right around us -- the dynamic growth here in the Asia-Pacific. The world's population has nearly tripled since 1950 – from 2.5 billion to nearly 7 billion today. We've added a billion people in just the past 12 years. And we are expected to add more than 2 billion more by 2050, much of it here in Asia.

More important than the raw increase in numbers of people is how these people will live. As economies improve, the per capita incomes of these next generations will improve as well. They will demand the same things we expect – bigger homes, cars, plasma tvs, supermarkets, you name it. Middle classes will demand more energy per person; they will consume more water per person; and they will expect higher quality food as well as higher-input food products, such as meat. With these twin pressures of population

growth and rising incomes, the U.N. estimates that the demand for food, energy, and water will rise much faster than the population. We expect food demand to rise by 70 percent by 2050.

Now we know that societies are adaptable. Two hundred years ago, Thomas Malthus predicted doom for our species when he wrote, "the period when the number of men surpasses their means of subsistence has long since arrived." Malthus announced that the world was already over-populated and beyond saving and that it would soon fall into massive hunger, misery and vice. Despite those dire predictions, the world population has increased more than 7 fold and per capita food consumption has actually increased.

So, given that history, I'm confident we can avoid catastrophe in the decades ahead if we recognize and address the challenge. But to feed, hydrate, and power all of those people will require early and unprecedented investment, a new level of cooperation, and a sharing of vision across borders beyond what our world has previously achieved. If we simply continue doing what we are doing, we will not have adequate food, water, or energy.

FOOD SECURITY

Let me start with food. The challenge is this: there are only three ways to increase agricultural production. First, devote more land to agriculture. Second, increase yields by applying more inputs such as fertilizer. And third, improve the efficiency of farming by adopting new technologies or practices. Over the past 50 years, we've relied largely on the first two factors - greater land and manufactured input use. They've contributed over one-half of the average annual growth in agricultural output. But there's only so much land, and there's only so much food the land will yield. This trend of using more to produce more is necessary but insufficient for the next 50 years.

A number of A and N Zed Sustain member companies are involved in some part of the food supply chain, whether as producers, investors, traders, or retailers. And we look to you for leadership in promoting two significant changes.

First, we'll need to change our technologies and farming practices and disseminate them around the world to reduce food waste and environmental damage from fertilizers and pesticides. There is tremendous waste in every part of the process of producing food. There is water waste in current farming practices that can be addressed with drip irrigation. There is soil waste -- tillage practices can preserve valuable top soil. And most of all there is transportation waste. About a third of all food produced never makes it to the consumer. The farmer doesn't have roads or equipment to get the food to market. Or the methods of storage or refrigeration mean that the food rots before it gets to the consumer. Finally there is institutional waste – corrupt governments selling the

food off to pay for arms while their people starve. So we need to modernize every part of the food chain around the world, to get more crops to market with less spoilage and more accountability.

The good news is that the agricultural productivity trends are starting to turn in the right direction. The U.S. Department of Agriculture estimates that in the past decade, improvements in farming practices and technology have accounted for almost 70 percent of the increase in global agricultural output.

Likewise, biotech crops have increased farmer income by decreasing pesticide use and increasing yields. While not a silver bullet, biotechnology is part of a package of technologies that will increase agricultural production and reduce poverty. And it's a tool that's in use not just by our farmers, but also farmers in Latin America, Africa, and Asia.

The second change is that we'll need to re-think our eating habits to promote more efficient food sources. The earth simply cannot provide for billions and billions of people to eat the way Americans and Australians and New Zealanders currently do. This year, President Obama launched a program called "Feed the Future," which among other things, is designed to help change how people eat – promoting more nutritious and efficient foods. In some cases it comes down to fortifying foods. We are currently working to increase the nutritional content of foods so that you can feed more with less with foods like naturally fortified bananas and rice.

In Bangladesh we are investing in new technologies to improve rice production, since rice is the primary staple crop in Bangladesh.

In Rwanda, where over 90 percent of households practice some form of farming, USAID is partnering with the World Food Program to assist maize and bean producers.

WATER

Now let me talk about water. Water is another, in some ways even more important, challenge. Already, over a billion people lack adequate water. Given current consumption rates in less than 15 years that number will triple. By 2050, we would need nine more healthy Murray Rivers at full annual flow just to meet the global water shortage. This is not a problem only here in the world's driest continent. And it is not news. We've seen it coming for years.

The biggest challenge with water, as with food, is changing how we think about it. In the U.S., water costs about $1.50 for every 1,000 gallons. We think of it in the same way as we think of air – as virtually free and unlimited. All of us waste water, in countries rich and poor, wet and dry. From the Middle East to the North China Plain to my own home

state of California, divisive politics and bad policies have prevented the efficient and equitable use of this most valuable of our natural resources. But droughts also have a wonderful capacity to focus the mind, as they certainly did in California, and here in Australia.

And we now see a water crisis looming across the planet. Eighteen months ago, Secretary Clinton highlighted the importance of water security as a "global imperative." World Bank President Robert Zoellick, announced that this is a priority for the World Bank. And late last year when I met with the American ambassadors from around the Asia-Pacific region, this emerged as one of our greatest diplomatic and developmental challenges.

Out of necessity, Australia is on the cutting edge of some of these efforts. A lot of the solutions are already familiar to you. On the supply side, we need to create more water through desalination and reverse osmosis and other technologies. Another way to increase supply would be to re-use grey water and other non-potable forms of water.

On the demand side, we need to get other nations to adopt practices that are employed here and in California, like outdoor water restrictions, water-saving devices like dual-flush toilets, smart grids, and establishing an appropriate price for water.

But the biggest challenge with water is going to be changing how people think. I'll give you an example. I currently have a blackberry in my pocket. It has a phone in it, an alarm clock, a clock, and other features. But I still have an alarm clock, a number of wrist watches, and a land-line. I don't need any of these, but I've always used them and I can't imagine living without them. But if we are going to make sure that we have enough water, we're going to have to get out of our comfortable habits and confront the real challenges of water scarcity – including changing how we produce, deliver, consume, and price water.

ENERGY

Finally, there is the issue of establishing a secure energy future. Let me give just a few facts and figures on this. Today, over 1.6 billion people live without electricity. That's 23 percent of the world's population. Overwhelmingly, they live in the least developed countries, and will need electricity to achieve any sort of sustainable economic development. In other nations and nations that are rapidly industrializing, the per-capita demand for energy continues to increase. No one knows this better than the people here in Australia who are experiencing unprecedented demand for brown coal, coking coal, and for iron ore and other commodities so that people can build things that will require even more energy.

The subject of how we produce energy is always contentious. Everyone seems to have their preferred fuel source and they don't want to hear about other sources. And so the debate too often stagnates. But at some level we all know the following facts are true:

(1) First, there is a finite amount of oil in the ground. Ultimately it will be exhausted. But all of our transportation systems – cars, trucks, airplanes, ships -- run principally if not entirely exclusively on oil products. This is unsustainable. At some point we need to develop alternatives to power these essential products, or else the shortages and conflicts will proliferate as we approach that day when we run out.

(2) Second, being dependent on oil makes nations like ours vulnerable. To the extent that a nation can use energy sources that they already have – sources like wind, solar, hydro, and biofuels – rather than oil, the less vulnerable we are to the politics or pressures of oil-producing nations.

(3) Third, our current energy supplies are hurting our health and environment compared to alternatives. Carbon is a big problem. But the risk comes from much more than excess carbon emissions, it also comes from other byproducts like sulfur dioxide, nitrogen dioxide, lead, soot, and other particulates. Anyone who has spent time in Beijing or Mexico City knows what I'm saying and has felt this in their own lungs.

So leadership requires us to confront the facts; we need to use less oil and coal and much more of these other energy sources. On this topic, where it is so easy to simply criticize rather than act, we have to get it right. The one thing on which there is clear agreement is that we cannot do nothing.

On the demand side, we are working toward more robust regulation of power plants, higher efficiency standards for automobiles and light trucks, and new building codes that demand energy efficiency, at the same time that our states are adopting smart grids and other innovations.

On the supply side, the U.S. has invested over $90 billion in incentives to produce clean sustainable energy supplies. Here's one example: two years ago, the U.S. produced 2 percent of the batteries for electric vehicles. By 2015, we'll produce 40% of them. Next year we will double the energy produced by solar energy and three years after that we'll double it again.

The narrative that there is no movement toward carbon trading in the U.S. is just false. This past week, California passed a comprehensive carbon trading scheme that covers all industries. This is the seventh largest economy in the world. Other states have formed regional groups to trade carbon emitted by stationary power plants.

President Obama has laid out a goal of generating 80 percent of America's electricity from renewable, nuclear, and clean gas and coal by 2035, under his Clean Energy Standard (CES) proposal. This will be a tough effort – special interests and lobbies will fight hard against every one of these innovations. But our future depends upon us not losing our nerve, no matter how many setbacks we encounter.

In short, the old systems for producing food, water, and energy that have served us so well are not sufficient for the future. The solutions again are out there. But we need your leadership and innovation to embrace them.

CONCLUSION

So let me end by thanking you. The thing our world needs in the decades ahead is the thing you've come here to help deliver. The best description of it is sustainable intensification: increasing the productivity per unit of land, water, and energy.

This will only happen if we make the investments and policies to support sustainability in these three areas. Fortunately, our three nations have never been content to react to the world as it is. We will not simply wait to see water or food shortages dislocate thousands or millions of people. Instead, we will work to ensure that our people are fed, that they have clean water, and that we can access the fuels that power our nations – ones that do not destroy jobs, or threaten our health and existence.

In short, as a friend of mine has said: "yes we can."

Thank you.